

=> d his

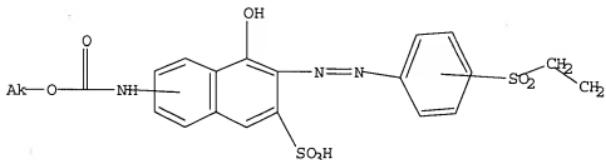
(FILE 'HOME' ENTERED AT 11:49:19 ON 02 MAY 2005)

FILE 'REGISTRY' ENTERED AT 11:49:27 ON 02 MAY 2005

L1 STRUCTURE uploaded
L2 1 S L1
L3 11 S L1 FULL

FILE 'CAPLUS' ENTERED AT 11:50:07 ON 02 MAY 2005
L4 2 S L3

=> d que 14 stat



Structure attributes must be viewed using STN Express query preparation.

L3 11 SEA FILE=REGISTRY SSS FUL L1

L4 2 SEA FILE=CAPLUS ABB=ON PLU=ON L3

=> d 1-2 bib abs hitstr

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626284 CAPLUS

DN 131:258869

TI Reactive black dye compositions for cellulose fibers

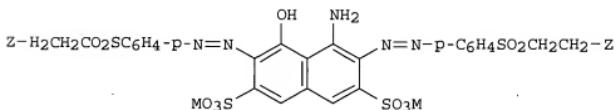
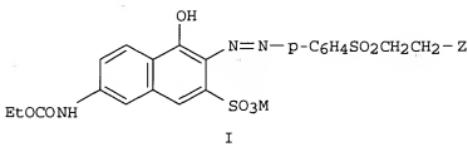
IN Oh, Seo Wha; Kang, Myeong Nyeo; Kim, Tae Kyung; Song, Mi Kyoung
 PA Korea Research Institute of Chemical Technology, S. Korea

SO PCT Int. Appl., 18 pp.
 CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9949897	A1	19990930	WO 1999-KR146	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066351	A1	20010110	EP 1999-909386	19990326
	EP 1066351	B1	20020703		
	R: CH, DE, GB, LI				
	JP 2002507654	T2	20020312	JP 2000-537952	19990326
	JP 3487827	B2	20040119		
	US 6443997	B1	20020903	US 2000-646952	20001120
PRAI	KR 1998-10610	A	19980326		
	WO 1999-KR146	W	19990326		
OS	MARPAT 131:258869				
GI					



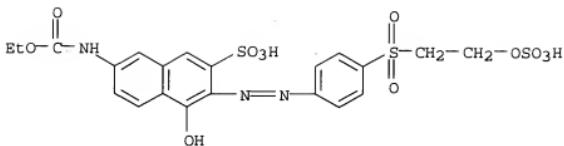
AB A reactive black dye composition with excellent several fastnesses, dyeing levelness, reproducibility and dyeing yield comprises a mixture with a certain amount ratio of an orange reactive dye I and a black dye II (Z = OSO₃M, OAc; M = alkaline metal atom).

IT 244757-82-2P 244757-83-3P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (reactive black dye compns. for cellulose fibers with excellent fastness and dyeing yield)

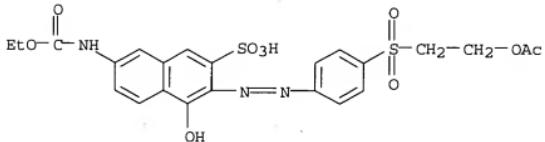
RN 244757-82-2 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[(ethoxycarbonyl)amino]-4-hydroxy-3-[(4-[[2-(sulfoxyethyl)sulfonyl]benzyl]azo)-disodium salt (9CI) (CA INDEX)



● 2 Na

RN 244757-83-3 CAPLUS
 CN 2-Naphthalenesulfonic acid, 3-[(4-[(2-(acetyloxy)ethyl]sulfonyl)phenyl]azo
 1-7-[(ethoxycarbonyl)amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX
 NAME)



● Na

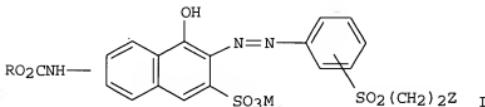
RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626282 CAPLUS
 DN 131:258911
 TI Reactive orange azo dyes containing vinyl sulfone groups and their production

IN Oh, Sea Wha; Kang, Myeong Nyeo; Kim, Tae Kyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948985	A1	19990930	WO 1999-KR142	19990326
	W: CN, IN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066348	A1	20010110	EP 1999-909382	19990326
	EP 1066348	B1	20030102		
	R: CH, DE, GB, LI				
	JP 2002507652	T2	20020312	JP 2000-537950	19990326
	JP 3487826	B2	20040119		
PRAI	KR 1998-10607	A	19980326		
	WO 1999-KR142	W	19990326		
OS	MARPAT 131:258911				
GI					



AB The present invention relates to reactive orange dyes containing vinyl sulfone groups and more particularly, to dyes which have 6(7)-(alkoxycarbonylamo)-4-hydroxy-2-naphthalenesulfonic acid as a chromophore and an aminophenyl β -substituted Et sulfone derivative as an azo coupler. The dyes (I; M = alkaline metal; R = Cl-4-alkyl; Z = OSO₃M, acetoxy) provide excellent fastness to light, washing, perspiration, and chlorine as well as better dyeing yield than other monofunctional reactive dye. Thus, 6-amino-4-hydroxy-2-naphthalenesulfonic acid was neutralized with LiOH and condensed with Et chloroformate to give a coupling component to which was then added diazotized 4-aminophenyl β -Et sulfone to provide an orange dye.

IT 244757-82-2P 244757-83-3P 245037-51-8P

245037-54-1P 245037-55-2P 245037-56-3P

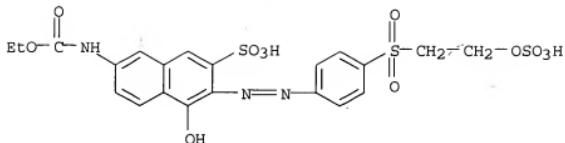
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(dye; production of reactive orange azo dyes containing vinyl sulfone

groups)

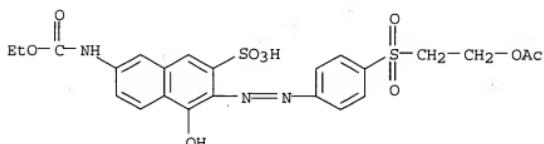
RN 244757-82-2 CAPLUS

CN 2-Naphthalenesulfonic acid, 7-[(ethoxycarbonyl)amino]-4-hydroxy-3-[[4-[[2-(sulfoxy)ethyl]sulfonyl]phenyl]azo]-, disodium salt (9CI) (CA INDEX NAME)



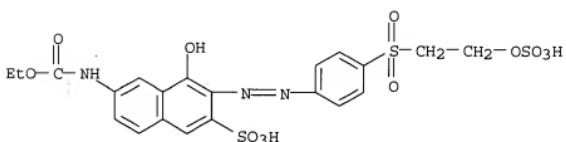
●2 Na

RN 244757-83-3 CAPLUS
 CN 2-Naphthalenesulfonic acid, 3-[[4-[(2-(ethoxycarbonyl)ethyl)sulfonyl]phenyl]azo]-7-[(ethoxycarbonyl)amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



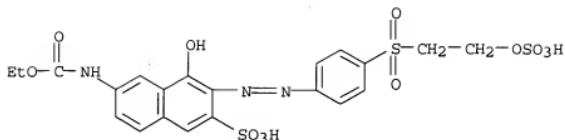
● Na

RN 245037-51-8 CAPLUS
 CN 2-Naphthalenesulfonic acid, 6-[(ethoxycarbonyl)amino]-4-hydroxy-3-[[4-[(2-sulfoxyethyl)sulfonyl]phenyl]azo]-, disodium salt (9CI) (CA INDEX NAME)



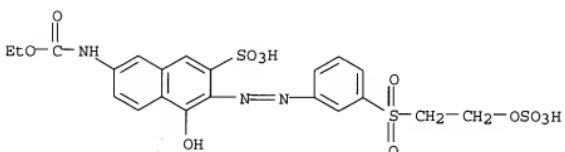
●2 Na

RN 245037-54-1 CAPLUS
 CN 2-Naphthalenesulfonic acid, 6-[(ethoxycarbonyl)amino]-4-hydroxy-3-[[4-[(2-sulfoxyethyl)sulfonyl]phenyl]azo]-, monosodium salt (9CI) (CA INDEX NAME)



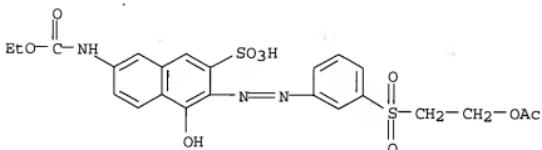
● Na

RN 245037-55-2 CAPLUS
 CN 2-Naphthalenesulfonic acid, 7-[(ethoxycarbonyl)amino]-4-hydroxy-3-[(3-[(2-sulfoxyethyl)sulfonyl]phenyl)azo]-, disodium salt (9CI) (CA INDEX NAME)



● 2 Na

RN 245037-56-3 CAPLUS
 CN 2-Naphthalenesulfonic acid, 3-[(3-[(2-(acetyloxy)ethyl)sulfonyl]phenyl)azo]-7-[(ethoxycarbonyl)amino]-4-hydroxy-, monosodium salt (9CI) (CA INDEX NAME)



● Na

=> => d his

(FILE 'HOME' ENTERED AT 11:49:19 ON 02 MAY 2005)

FILE 'REGISTRY' ENTERED AT 11:49:27 ON 02 MAY 2005

L1 STRUCTURE uploaded

L2 1 S L1

L3 11 S L1 FULL

FILE 'CAPLUS' ENTERED AT 11:50:07 ON 02 MAY 2005

L4 2 S L3

 E OH WEA WHA/AU

 E OH SEA WHA/AU

L5 19 S E3

 E KANG MYEONG NYEO/AU

L6 6 S E3

 E KIM TAE KYUNG/AU

L7 98 S E3

L8 111 S L5 OR L6 OR L7

L9 14 S L8 AND REACTIVE

L10 7 S L9 AND (AZO OR MONOAZO)

=> d que 110 stat

L5 19 SEA FILE=CAPLUS ABB=ON PLU=ON "OH SEA WHA"/AU

L6 6 SEA FILE=CAPLUS ABB=ON PLU=ON "KANG MYEONG NYEO"/AU

L7 98 SEA FILE=CAPLUS ABB=ON PLU=ON "KIM TAE KYUNG"/AU

L8 111 SEA FILE=CAPLUS ABB=ON PLU=ON L5 OR L6 OR L7

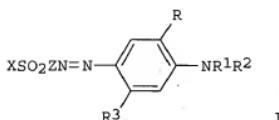
L9 14 SEA FILE=CAPLUS ABB=ON PLU=ON L8 AND REACTIVE

L10 7 SEA FILE=CAPLUS ABB=ON PLU=ON L9 AND (AZO OR MONOAZO)

=> d 1-7 bib abs

L10 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 2002:555585 CAPLUS
 DN 137:126419
 TI Disperse-reactive azo dyes containing
 acetoxyethylsulfonyl or vinylsulfonyl groups and their production
 IN Oh, Sea Wha; Shin, Seung Rim; Kim, Tae Kyung; Kim, Sun
 Il; Shin, Jong Il
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 29 pp.
 CODEN: PIKXD2
 DT Patent
 LA English
 FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE

 PI WO 2002057370 A1 20020725 WO 2002-KR69 20020116
 W: CN, JP, US
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
 PT, SE, TR
 KR 2002061777 A 20020725 KR 2001-2733 20010117
 KR 2002061916 A 20020725 KR 2001-3009 20010118
 KR 2002063391 A 20020803 KR 2001-4026 20010129
 EP 1352032 A1 20031015 EP 2002-715901 20020116
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
 IE, FI, CY, TR
 JP 2004525208 T2 20040819 JP 2002-558434 20020116
 US 2004077846 A1 20040422 US 2003-466356 20030716
 US 6884876 B2 20050426
 PRAI KR 2001-2733 A 20010117
 KR 2001-3009 A 20010118
 KR 2001-4026 A 20010129
 WO 2002-KR69 W 20020116
 OS MARPAT 137:126419
 GI



AB The invention relates to water-insol. disperse-reactive dyes (I);
 R, R₁, R₂, R₃ = H, alkyl, alkoxy, cyanoalkyl, aminoacetyl; X =
 2-acetoxyethyl, vinyl; Z = aromatic or benzothiazole connecting group) by
 diazotization of XSO₂ZNH₂ and coupling with the appropriate substituted
 aniline. I have good fastness properties. In an example, orange
 (λ_{max} 459 nm) 2-acetoxyethyl 4-aminophenyl sulfone-N,N-
 diethylaniline was prepared in 88.5% yield.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:472911 CAPLUS

DN 137:7496

TI Preparation of blue **reactive** dyes having high dyeability and reliability without generating dye wastewater

IN Kang, Myeong Nyeo; Kwon, Eun Gyeong; Kim, Jin Su; Song, Mi Gyeong; Oh, Se Hwa; Yoon, Seong Nyeong

PA Korea Research Institute of Chemical Technology, S. Korea

SO Repub. Korean Kongkae Taeho Kongbo, No pp. given

CODEN: KRXXA7

DT Patent

LA Korean

PAN.CNT 1

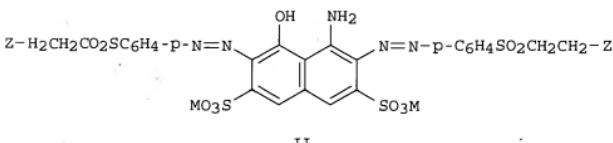
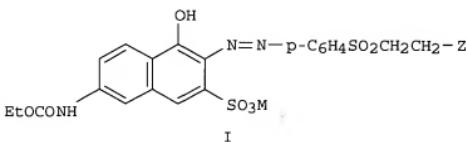
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI KR 2000055599	A	20000915	KR 1999-4295	19990208
PRAI KR 1999-4295		19990208		

AB The three-effector type **reactive** dyes contain one monochlorotriazine and two vinyl sulfonyl groups in one dye mol. and is prepared by steps: (1) diazotizing a compound and coupling the diazotized compound with an 1-naphthol-8-amino-3,6-disulfonic acid neutral solution, (2) separating condensed product from a reaction of phenylenediamine with cyanuric chloride at a temperature 0-5°, (3) adding the reaction solution from step 1 at a temperature 0-5° and performing a coupling reaction at a pH <7, and adding aminophenyl-beta-acetoxyethylsulfone or aminophenyl-beta-sulfatoethylsulfone to the coupling solution of the step (3) at a temperature 35-45°.

LI0 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626284 CAPLUS
 DN 131:258869
 TI Reactive black dye compositions for cellulose fibers
 IN Oh, Seo Wha; Kang, Myeong Nyeo; Kim, Tae Kyung
 ; Song, Mi Kyoung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 18 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948987	A1	19990930	WO 1999-KR146	19990326
	W: CN, IN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066351	A1	20010110	EP 1999-909386	19990326
	EP 1066351	B1	20020703		
	R: CH, DE, GB, LI				
	JP 2002507654	T2	20020312	JP 2000-537952	19990326
	JP 3487827	B2	20040119		
	US 6443997	B1	20020903	US 2000-646952	20001120
PRAI KR 1998-10610	A	19980326			
WO 1999-KR146	W	19990326			
OS MARPAT 131:258869					
GI					



AB A reactive black dye composition with excellent several fastnesses, dyeing levelness, reproducibility and dyeing yield comprises a mixture with a certain amount ratio of an orange reactive dye I and a black dye II (Z = OSO3M, OAc; M = alkaline metal atom).

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626283 CAPLUS

DN 131:258868

TI Reactive black dyes containing acetoxyethyl sulfone moiety
 IN Oh, Sea Wha; Kang, Myeong Nyeo; Shin, Seung Rim;
 Kim, Tae Kyung; Yun, Sung Nyung

PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 19 pp.

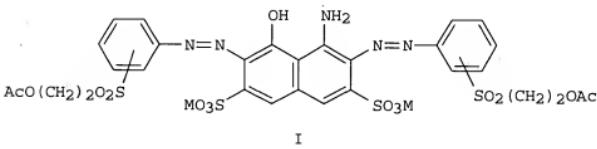
CODEN: PIXXD2

DT Patent
 LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948986	A1	19990930	WO 1999-KR144	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066349	A1	20010110	EP 1999-909384	19990326
	EP 1066349	B1	20030611		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	JP 2002507653	T2	20020312	JP 2000-537951	19990326
	JP 3567137	B2	20040922		
	US 6326474	B1	20011204	US 2000-646938	20001120
PRAI	KR 1998-10606	A	19980326		
	WO 1999-KR144	W	19990326		

GI



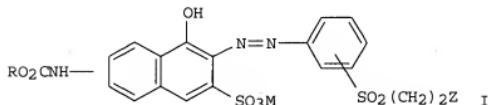
AB The black dyes I (M = alkaline metal atom) is characterized by lessening the loss of dyes in filtering process owing to the low solubility by introducing the aminophenyl- β -acetoxyethyl sulfone moiety, saving the cost for waste water treatment by using a small amount of salt in salting-out process and furthermore obtaining bright color with high dyeing yield and good substantivity.

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626282 CAPLUS
 DN 131:258911
 TI **Reactive orange azo** dyes containing vinyl sulfone
 groups and their production
 IN Oh, Seo Wha; Kang, Myeong Nyeo; Kim, Tae Kyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 16 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948985	A1	19990930	WO 1999-KR142	19990326
	W: CN, IN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066348	A1	20010110	EP 1999-909382	19990326
	EP 1066348	B1	20030102		
	R: CH, DE, GB, LI				
	JP 2002507652	T2	20020312	JP 2000-537950	19990326
	JP 3487826	B2	20040119		
PRAI	KR 1998-10607	A	19980326		
	WO 1999-KR142	W	19990326		
OS	MARPAT 131:258911				
GI					



AB The present invention relates to **reactive orange** dyes containing vinyl sulfone groups and more particularly, to dyes which have 6(7)-(alkoxycarbonylamo)-4-hydroxy-2-naphthalenesulfonic acid as a chromophore and an aminophenyl β -substituted Et sulfone derivative as an **azo** coupler. The dyes (I; M = alkaline metal; R = Cl-4-alkyl; Z = OSO₃M, acetoxy) provide excellent fastness to light, washing, perspiration, and chlorine as well as better dyeing yield than other monofunctional **reactive** dye. Thus, 6-amino-4-hydroxy-2-naphthalenesulfonic acid was neutralized with LiOH and condensed with Et chloroformate to give a coupling component to which was then added diazotized 4-aminophenyl β -Et sulfone to provide an orange dye.

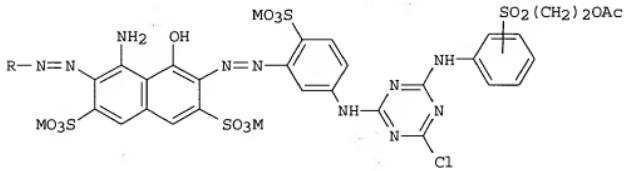
RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626281 CAPLUS
 DN 131:258910
 TI **Reactive** blue dyes containing monochlorotriazine and
 acetoxyethyl sulfone groups and their production
 IN Oh, Seo Wha; Kang, Myeong Nyeo; Kim, Tae Kyung
 PA Korea Research Institute of Chemical Technology, S. Korea
 SO PCT Int. Appl., 21 pp.
 CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948984	A1	19990930	WO 1999-KR143	19990326
	W: CN, IN, JP, US RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1071727	A1	20010131	EP 1999-909383	19990326
	EP 1071727	B1	20020612		
	R: CH, DE, GB, LI				
	JP 2002507651	T2	20020312	JP 2000-537949	19990326
	JP 3567136	B2	20040922		
	US 6307033	B1	20011023	US 2000-646936	20001120
PRAI	KR 1998-10609	A	19980326		
	WO 1999-KR143	W	19990326		

GI



I

AB Bifunctional blue **reactive** dyes and more particularly, dyes with monochlorotriazine and 2-acetoxyethyl sulfone **reactive** groups (I; R = C6H4-p-SO3M, M = alkaline metal atom) are prepared, which provide an excellent combination of properties in that (1) the introduction of aminophenyl β -acetoxyethyl sulfone group to the dye may minimize the loss of dye, since its low solubility in water lessens the amount of the remaining solution during filtration, (2) an easier salting-out process requires a smaller amount of salt during the process so that the costs for the treatment of waste water may be significantly reduced, and (3) a better dyeing yield with enhanced substantivity and better brightness in color. Thus, p-sulfanilic acid-1-naphthol-8-amino-3,6-disulfonic acid was prepared and coupled with the diazotized 1:1 adduct of m-phenylenediamine-4-sulfonic acid and cyanuric chloride and the resulting dichlorotriazinyl diazo compound was condensed with 2-acetoxyethyl 4-aminophenyl sulfone to provide a blue **reactive** dye.

09/646,937

Page 14

L10 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2005 ACS on STN
 AN 1999:626280 CAPLUS

DN 131:258909

TI **Reactive** red dyes containing monochlorotriazine and acetoxyethyl sulfone groups and their production

IN Oh, Sea Wha; Kang, Myeong Nyeo; Shin, Seung Rim;
 Kim, Tae Kyung; Song, Mi Kyoung

PA Korea Research Institute of Chemical Technology, S. Korea

SO PCT Int. Appl., 20 pp.

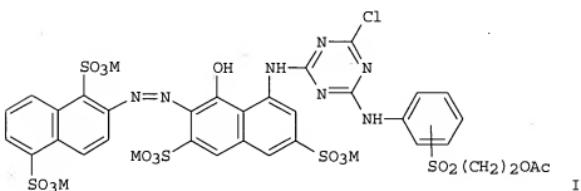
CODEN: PIXXD2

DT Patent

LA English

FAN CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948983	A1	19990930	WO 1999-KR145	19990326
	W: CN, IN, JP, US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1066344	A1	20010110	EP 1999-909385	19990326
	EP 1066344	B1	20020724		
	R: CH, DE, GB, LI				
	JP 2002507650	T2	20020312	JP 2000-537948	19990326
	JP 3567135	B2	20040922		
	US 6310187	B1	20011030	US 2001-646868	20010409
PRAI	KR 1998-10608	A	19980326		
	WO 1999-KR145	W	19990326		
OS	MARPAT 131:258909				
GI					



AB Bifunctional red **reactive** dyes and more particularly, dyes with monochlorotriazine and acetoxyethyl sulfone **reactive** groups (I; M = alkaline metal atom) are obtained, which provide excellent combination of properties in that (1) the introduction of an aminophenyl β -acetoxyethyl sulfone group to the dye may minimize the loss of dye, since its low solubility in water lessens the amount of the remaining solution during filtration, (2) an easier salting-out process requires a smaller amount of salt during the process so that the costs for the treatment of wastewater may be significantly reduced, and (3) a better dyeing yield with enhanced substantivity and better brightness in color. In an example, a 1:1 condensate of 1-naphthol-8-amino-3,6-disulfonic acid was used as a coupling component with diazotized 2-amino-1,5-naphthalenedisulfonic acid diazo component and the resulting dichlorotriazine azo dye was condensed with 2-acetoxyethyl 4-aminophenyl sulfone to provide a red **reactive** dye.

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD
 ALL CITATIONS AVAILABLE IN THE RE FORMAT